

WHAT IS CLAIMED IS:

1. An apparatus for sensing an environmental temperature around a sensor as a temperature parameter signal and correcting a  
5 sensor signal outputted from the sensor based on the temperature parameter signal, said temperature parameter signal depending on the environmental temperature, said sensor signal having a predetermined temperature dependent characteristic that depends on the environmental temperature, said apparatus comprising:

10 a slope correction signal setting unit configured to output selectively one of a plurality of direct current signals according to the sensed temperature parameter signal, levels of said plurality of direct current signals being determined to correspond to the predetermined temperature dependent characteristic of the sensor signal;

15 an analog amplifying circuit connected to the slope correction signal setting unit and configured to amplify the outputted direct current signal according to the sensed temperature parameter signal; and

an analog arithmetic circuit connected to the analog amplifying circuit and configured to carry out a predetermined arithmetic operation  
20 based on the amplified direct current signal and the sensor signal.

2. An apparatus according to claim 1, wherein said sensor has a usable temperature range, said predetermined temperature dependent characteristic varies within the usable temperature range according to a  
25 variation of the environmental temperature, and said plurality of direct current signals are set within the usable temperature range so that loci of

the levels of the direct current signals within the usable temperature range approximate to the predetermined temperature dependent characteristic, respectively.

5           3. An apparatus according to claim 1, wherein said slope correction signal setting unit includes:

          a memory on which digital correction data corresponding to the direct current signals is stored;

          a digital-to-analog converting unit configured to convert the digital  
10   correction data into the direct current signals; and

          a switch unit connected to the digital-to-analog converting unit and configured to output selectively one of the plurality of direct current signals according to the sensed temperature parameter signal.

15           4. An apparatus according to claim 1, wherein said slope correction signal setting unit is configured so that the levels of the plurality of the direct current signals are externally adjustable, respectively.

20           5. An apparatus according to claim 1, wherein said sensor has a usable temperature range, and said predetermined temperature dependent characteristic varies within the usable temperature range according to a variation of the environmental temperature, further comprising an absolute correction signal setting unit configured to set an  
25   absolute direct current signal for correcting the predetermined temperature dependent characteristic over the usable temperature range.

6. An apparatus according to claim 5, wherein said absolute correction signal setting unit is configured so that a level of the absolute direct current signal is externally adjustable.

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7. An apparatus according to claim 5, wherein said predetermined arithmetic operation includes first and second predetermined arithmetic operations, and said analog arithmetic circuit is connected to the absolute correction signal setting unit and configured to:

10 carry out the first predetermined arithmetic operation based on the absolute direct current signal and the amplified direct current signal; and

carry out the second predetermined arithmetic operation based on a result of the first predetermined arithmetic operation, the absolute direct current signal, and the sensor signal,

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said result of the first arithmetic operation being made zero at a predetermined threshold temperature,

said slope correction signal setting unit being configured to output selectively one of the plurality of direct current signals when the environmental temperature exceeds the predetermined threshold temperature, and another one thereof when the environmental temperature does not exceed the predetermined threshold temperature.

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8. An apparatus for sensing an environmental temperature around a yaw rate sensor as a temperature parameter signal and correcting a sensor signal outputted from the yaw rate sensor based on

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the temperature parameter signal, said temperature parameter signal depending on the environmental temperature, said sensor signal having a predetermined temperature dependent characteristic that depends on the environmental temperature, said apparatus comprising:

5           a slope correction signal setting unit configured to output selectively one of a plurality of direct current signals according to the sensed temperature parameter signal, levels of said plurality of direct current signals being determined to correspond to the predetermined temperature dependent characteristic of the sensor signal;

10           an analog amplifying circuit connected to the slope correction signal setting unit and configured to amplify the outputted direct current signal according to the sensed temperature parameter signal; and

            an analog arithmetic circuit connected to the analog amplifying circuit and configured to carry out a predetermined arithmetic operation  
15          based on the amplified direct current signal and the sensor signal.

9. An apparatus according to claim 8, wherein said yaw rate sensor has a usable temperature range, said predetermined temperature dependent characteristic varies within the usable temperature range  
20          according to a variation of the environmental temperature, and said plurality of direct current signals are set within the usable temperature range so that loci of the levels of the direct current signals within the usable temperature range approximate to the predetermined temperature dependent characteristic, respectively.

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10. An apparatus according to claim 8, wherein said slope

correction signal setting unit includes:

a memory on which digital correction data corresponding to the direct current signals is stored;

5 a digital-to-analog converting unit configured to convert the digital correction data into the direct current signals; and

a switch unit connected to the digital-to-analog converting unit and configured to output selectively one of the plurality of direct current signals according to the sensed temperature parameter signal.

10 11. An apparatus according to claim 8, wherein said slope correction signal setting unit is configured so that the levels of the plurality of the direct current signals are externally adjustable, respectively.

15 12. An apparatus according to claim 8, wherein said yaw rate sensor has a usable temperature range, and said predetermined temperature dependent characteristic varies within the usable temperature range according to a variation of the environmental temperature, further comprising an absolute correction signal setting unit  
20 configured to set an absolute direct current signal for correcting the predetermined temperature dependent characteristic over the usable temperature range.

25 13. An apparatus according to claim 12, wherein said an absolute correction signal setting unit is configured so that a level of the absolute direct current signal is externally adjustable.

14. An apparatus according to claim 12, wherein said predetermined arithmetic operation includes first and second predetermined arithmetic operations, and said analog arithmetic circuit is  
5 connected to the absolute correction signal setting unit and configured to:

carry out the first predetermined arithmetic operation based on the absolute direct current signal and the amplified direct current signal;  
and

carry out the second predetermined arithmetic operation based on  
10 a result of the first predetermined arithmetic operation, the absolute direct current signal, and the sensor signal,

said result of the first arithmetic operation being made zero at a predetermined threshold temperature,

said slope correction signal setting unit being configured to output  
15 selectively one of the plurality of direct current signals when the environmental temperature exceeds the predetermined threshold temperature, and another one thereof when the environmental temperature does not exceed the predetermined threshold temperature.

20 15. A method of correcting a sensor signal outputted from a sensor, said method comprising:

sensing an environmental temperature around the sensor as a temperature parameter signal, said temperature parameter signal depending on the environmental temperature, said sensor signal having a  
25 predetermined temperature dependent characteristic that depends on the environmental temperature;

- outputting selectively one of a plurality of direct current signals according to the sensed temperature parameter signal, levels of said plurality of direct current signals being determined to correspond to the predetermined temperature dependent characteristic of the sensor signal;
- 5        amplifying the outputted direct current signal according to the sensed temperature parameter signal; and
- carrying out a predetermined arithmetic operation based on the amplified direct current signal and the sensor signal.